

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

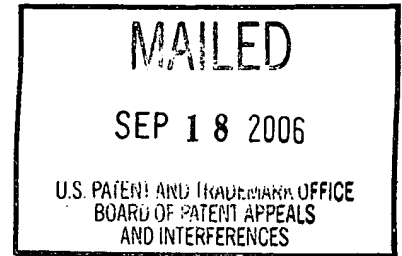
UNITED STATES PATENT AND TRADEMARK OFFICE

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Ex parte ALISON HOPKINS

Appeal No. 2006-2569
Application No. 09/485,245

ON BRIEF



Before ADAMS, MILLS and GREEN, Administrative Patent Judges.

GREEN, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 7-14. Claims 7 and 11 are the independent claims on appeal, and read as follows:

7. A method of forming a random mixture of oligonucleotides which is resistant to self-annealing comprising the steps of selecting a random mixture of oligonucleotides which are 6-mers to 8-mers and drying said mixture.

11. In a method of forming a random mixture of oligonucleotides the improvement comprising the steps of selecting a random mixture of oligonucleotides which are 6-mers to 8-mers and drying said mixture.

Claims 7-10 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. In addition, claims 7-14 stand rejected under 35 U.S.C. § 103(a) as being obvious over the combination of Godiska¹ and Shen.² After careful review of the record and consideration of the issues before us, we affirm the rejection of claims 7-14 as being obvious over the combination of Godiska and Shen. Because we affirm that rejection, we decline to reach the merits of the rejection under 35 U.S.C. § 112, first paragraph.

DISCUSSION

Claims 7-14 stand rejected under 35 U.S.C. § 103(a) as being obvious over the combination of Godiska and Shen. As appellant does not argue the claims separately, they stand or fall together, and we focus our analysis on claim 7. See In re Dance, 160 F.3d 1339, 1340 n.2, 48 USPQ2d 1635, 1636 n.2 (Fed. Cir. 1998) (noting that dependent claims not argued separately on the merits rise or fall with the independent claim to which they relate).

Godiska is cited for teaching “a method comprising a random mixture of oligonucleotides which are 6-mers, wherein the composition further contains at least a supply of nucleotides for chain extension, a labeled nucleotide, and a

¹ Godiska et al. (Godiska), U.S. Patent No. 5,759,804, issued June 2, 1998.

² Shen et al. (Shen), EP 0 726 310 A1, published August 14, 1996.

polymerase enzyme.” Examiner’s Answer, page 4. The examiner acknowledges that “Godiska [] differs from the instant invention in that Godiska [] do[es] not expressly teach wherein the solution comprising the random mixture of 6-mers is in a freeze-dried state.” Id.

Shen is cited for teaching “a method and composition similar to that of Godiska [], wherein said composition is present in a dry state.” Id. Shen is also relied upon for teaching “that the composition present in the dry state is advantageous because the composition is stable for a prolonged period, even when stored at high temperature,” and that it “is useful in shipping and storage of commercial preparations for use in e.g., nucleic acid amplification kits.” Id. at 4-5.

The examiner concludes:

Therefore, it would have been prima facie obvious to one of ordinary skill in the art at the time the claimed invention was made to have been motivated to have provided the random mixture of 6-mers in the method as taught by Godiska [] in a dried state for the advantage taught by Shen [] that a nucleic acid composition (such as primers) present in a dried state is useful in shipping and storage of commercial preparations due [to, sic] its increased stability, even when stored for prolonged periods or when stored at high temperatures.

Id. at 5.

“In rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden of presenting a prima facie case of obviousness. Only if that burden is

met, does the burden of coming forward with evidence or argument shift to the applicant.” In re Rijckaert, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993) (citations omitted). The test of obviousness is “whether the teachings of the prior art, taken as a whole, would have made obvious the claimed invention.” In re Gorman, 933 F.2d 982, 986, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991).

Appellant argues that the rejection is in error as they have “discovered that short (6-8 mers) dried primers unexpectedly resist self-annealing and provide improvements in activity and labeling intensity compared with longer dried primers.” Appeal Brief,³ page 6. Appellant relies on Examples 2 and 4, arguing that those examples demonstrate unexpected results “by identifying a critical difference in self-priming (self-annealing) activity and labeling intensity between short dried 6-8 mers which resist self-annealing compared with longer . . . dried 9-mers (and above) . . . used in the art.” Id. (emphasis in original).

Appellant contends further that the rejection should be reversed because “Godiska and Shen fail to teach the desirability of short primers (6-8 mers) in a dried primer system or that 6-8 mers would behave differently with respect to self-priming activity and labeling intensity than do 9-mers.” Id. Godiska, appellant asserts, teaches liquid 6-mers, but fails to teach the criticality of the 6-

³ All references to the “Appeal Brief” are to the “Revised Brief on Appeal,” dated September 12, 2005.

8 mer range, and that such primers would be desirable in a dried system. See id. at 6-7. Shen, according to appellant, teaches dried 22-mer and 48-mer primers, “but fails to suggest that such dried primers should be shortened, or, alternatively any reason why the short primers of Godiska should be dried.” Id. at 7.

Appellant’s arguments are not found to be convincing. With respect to appellant’s argument that Godiska and Shen fail to teach the desirability of short primers (6-8 mers) in a dried primer system or that 6-8 mers would behave differently with respect to self-priming activity and labeling intensity than do 9-mers, the motivation to combine references does not have to be identical to that of appellant to establish obviousness. See In re Kemps, 97 F.3d 1427, 1430, 40 USPQ2d 1309, 1311 (Fed. Cir. 1996). In the rejection before us, Godiska is cited for teaching a priming reaction using random 6-mer (hexamer) primers. See Godiska, col. 8, lines 29-30. Shen, although not teaching 6-mer to 8-mer random primers, as noted by the rejection, teaches the desirability of providing dried reagents. Thus, it would have been obvious to dry the reagents of Godiska as taught by Shen to achieve the advantages of Shen of being useful in shipping and storage of commercial preparations due to increased stability, even when stored for prolonged periods or when stored at high temperatures.

We also do not find appellant's purported showing of unexpected results to be sufficient to rebut the prima facie case of obviousness set forth by the examiner. Example 2 of the specification compares the percentage of self-priming and the stability of dried hexamers versus dried nonomers. See Specification, pages 8-9. Example 4 of the specification also compares the properties of dried hexamers to dried nonamers.

"[W]hen unexpected results are used as evidence of nonobviousness, the results must be shown to be unexpected compared with the closest prior art." In re Baxter Travenol Labs., 952 F.2d 388, 392, 21 USPQ2d 1281, 1285 (Fed. Cir. 1991), (citing In re De Blauwe, 736 F.2d 699, 705, 222 USPQ 191, 196 (Fed. Cir. 1984)). We find that the closest prior art is not dried nonamers, but random 6-mer primers that have not been dried, as taught by Godiska. But as appellant showing of unexpected results does not address the closest prior art, appellant has not rebutted the prima facie case, and the rejection is affirmed.

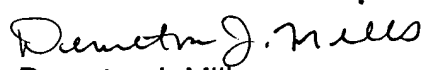
CONCLUSION

Because the examiner has set forth a prima facie case of obviousness as to claims 7-14, which has not been sufficiently rebutted by appellant, the rejection is affirmed.

AFFIRMED



Donald E. Adams
Administrative Patent Judge



Demetra J. Mills
Administrative Patent Judge



Lora M. Green
Administrative Patent Judge

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